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CASE REPORT

Omphalitis Leading to Retroperitoneal Abscess in a Neonate: A Case Report

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ABSTRACT

Retroperitoneal abscess in neonates is extremely rare and can be fatal in case of late diagnosis. A 7-day-old newborn presented with irritability, fever, lethargy, periumbilical erythema, and a tender abdominal mass. The initial laboratory findings were a high c-reactive protein, and respiratory alkalosis. An emergent laparotomy was performed revealing a retroperitoneal abscess that required drainage. The only etiology identified in the patient was omphalitis.

Key words: Retroperitoneal abscess; Newborn; Omphalitis; Intestinal obstruction; NEC

INTRODUCTION

Retroperitoneal abscesses in neonates are extremely rare and can be fatal if not identified early.[1] Only two cases of retroperitoneal abscesses associated with omphalitis have been published in the literature including a case of a newborn.[2] Herein, we report the second case of a retroperitoneal abscess associated with omphalitis in a neonate.

CASE REPORT

A 7-day-old neonate, born by uncomplicated delivery (full-term), without pathological or maternal-fetal risk, presented with 2-days history of irritability, fever, and lethargy. On physical examination, she was febrile and sick; abdomen was distended with periumbilical erythema. On palpation, a tender abdominal mass was appreciable. CBC was normal but CRP was quite high (230 mg/dl). Arterial blood gas analysis showed alkalosis (pH 7.49, paO2 69 mmHg, paCO2 28 mmHg, HCO3 21 mEq/L, base excess -1.6 mEq/L). Omphalitis and a probable necrotizing enterocolitis were suspected. Abdominal radiograph showed dilated bowel loops with fluid levels (lateral decubitus) (Fig.1). An orogastric tube was inserted which drained feculent content, therefore, intestinal perforation was immediately suspected and the patient was taken to emergency OT. Laparotomy revealed adherent intestinal loops with a retroperitoneal abscess containing about 25 ml of purulent material, communicating to the right iliac fossa. Surgical drainage was performed and pus was sent for culture (Escherichia coli with ampicillin-sulbactam resistance). Postoperative recovery was uneventful. Postoperative workup for focus of infection was unyielding (Blood and urinary cultures were negatives, renal ultrasound and Doppler were normal, serum immunoglobulins (IgG, IgM

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and IgA) were also normal). The patient was kept hospitalized for 14 days for IV antibiotics and discharged in good clinical condition. The omphalitis was settled. The patient is doing fine on follow-up.

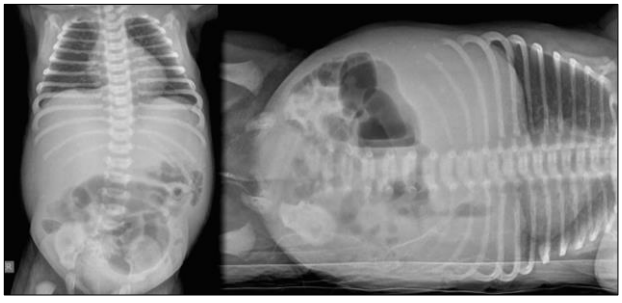

Figure 1. Abdominal radiograph of the patient showing dilated bowel loops and the presence of fluid levels (lateral decubitus).

DISCUSSION

Retroperitoneal abscesses in neonates are extremely rare; they can be primary or secondary to the extension of a pathological process of an adjacent structure.[1] Infections are responsible for 36% of neonatal mortality worldwide and neonatal sepsis may stem from local umbilical cord infections which can become systemic.[3] The clinical presentation can be with an inflamed umbilical/periumbilical region, fever, lethargy, reluctance to feed, and occasionally an abdominal mass.[1,4] In our case, in addition to above mentioned symptoms, the patient also had features of intestinal obstruction owing to intestinal adhesions which may point to the intrabdominal infective process.

In most cases, the etiopathogenesis is idiopathic. Some cases of iliopsoas abscesses the etiology is intramuscular hemorrhage, infection of the umbilical venous catheter, urinary tract infections, bacteremia, and pustular lesions.[1] In the index case, the probable etiology was omphalitis in absence of any other focus of infection. In the previous reports of omphalitis associated retroperitoneal abscesses, the bug cultured was Staphylococcus aureus; however, in our case it was Escherichia coli.[2] E. Coli is also one of the bacteria causing omphalitis and is a part of GIT flora and often spread hematogenous.[5] The clinical response to surgical drainage and antibiotics have been good [1,2,4] as observed in the index case.

To conclude, omphalitis can progress to intrabdominal compartment and produce various complications such as intestinal obstruction secondary to adhesions and septicemia owing to associated retroperitoneal abscess. Early diagnosis and prompt surgical drainage with antibiotics is proved life saving in the index case.

Consent: Authors declared that they have taken informed written consent, for publication of this report along with clinical photographs/material, from the legal guardian of the patient with an under-standing that every effort will be made to conceal the identity of the patient however it cannot be guaranteed.

Author Contributions: All the authors contributed fully in concept, literature review, and drafting of the manuscript and approved the final version of this manuscript.

REFERENCES

1. Han YM, Kim AY, Lim RK, Park KH, Byun SY, Kim SH, et al. Neonatal iliopsoas abscess: The first Korean case. J Korean Med Sci. 2015; 30:1203-6.
2. Feo CF, Dessanti A, Franco B, Ganau A, Iannuccelli M. Retroperitoneal abscess and omphalitis in young infants. Acta Paediatr. 2003; 92:122-5.
3. Lawn JE, Cousens S, Zupan J. 4 million neonatal deaths: when? Where? Why?. Lancet. 2005; 365:891-900.
4. Sedaghatian MR, Barkhordar J, Gerami S. Retroperitoneal abscess presenting as an abdominal mass in neonate. J Pediatr Surg. 1978; 13:544-5.
5. Fraser N, Davies BW, Cusack J. Neonatal omphalitis: a review of its serious complications. Acta Paediatr. 2006; 95:519-22.